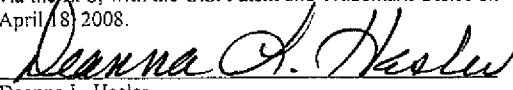


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Deanna L. Hasler

**PATENT**

**Case No.: 11336/926 (P02090US)**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Christian Bruelle-Drews

Serial No.: 10/528,870

Filed: March 24, 2005

For: AUDIO SYSTEM WITH BALANCE SETTING  
BASED ON INFORMATION ADDRESSES

Group Art Unit: 2615

Examiner: Lao, Lun S.

Confirmation No. 6224

**APPEAL BRIEF**

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

This is an appeal from the Final Rejection mailed July 30, 2007, of claims 1, 6-8, 10, 11, 24, 25, 28, 31-33 and 38-45, which are now pending in the above captioned case. The Notice of Appeal was timely filed on October 30, 2007, and the required fees have been paid. A Notice of Panel Decision from Pre-Appeal Brief Review was mailed on February 19, 2008, and a Request for Extension of Time to file this Appeal Brief is being filed herewith to extend the due date for this Appeal Brief to April 19, 2008. Accordingly, this Appeal Brief has been timely filed.

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(The portions of Yasuhara cited by the Examiner in the rejections being appealed.)

TAB 1 – Yasuhara, Col. 8, line 20 – Col. 9, line 9, and Figures 3 and 6

TAB 2 – Yasuhara, Col. 4, lines 10-58, and Figures 1-13

TAB 3 – Yasuhara, Col. 10, line 36 – Col. 11, line 67, and Figures 1-3, 7-9

TAB 4 – Yasuhara, Col. 6, lines 12-43, and Figure 3

TAB 5 – Yasuhara, Col. 6, lines 15-22, and Col. 7, lines 36-52, and Figures 1 and 3

TAB 6 – Yasuhara, Entire U.S. Patent No. 7,190,798

**I. REAL PARTY IN INTEREST**

The present patent application is owned by Harman Becker Automotive Systems GmbH, the real party in interest.

**II. RELATED APPEALS AND INTERFERENCES**

There are no related Appeals or Interferences for this case.

**III. STATUS OF CLAIMS**

No claims have been allowed.

Claims 1, 6-8, 10, 11, 24, 25, 28, 31-33, and 38-45 are pending. Claims 2-5, 9, 12-23, 26, 27, 29, 30, 34-37 and 46-56 are cancelled. All of the pending claims have been rejected and their rejections are hereby being presented for consideration on Appeal.

**IV. STATUS OF AMENDMENTS**

No claim amendments were filed subsequent to a final rejection. Claims 2-5, 9, 12-16, 18-23, 27, 29, 30, 34-37, 46 and 49-55 are cancelled by an Amendment Prior to Filing of Appeal Brief Pursuant to 37 CFR § 41.33(b)(1), without any concession regarding their allowability or prejudice to pursue the claims in a continuing application. These claims are being cancelled to reduce the issues on appeal and expedite the allowance of the non-cancelled claims on appeal.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

### A. Introduction

As set forth more fully below for each of the claims to be considered in this Appeal, this invention relates to a vehicle audio system (100), including a plurality of audio sources (102) whose audio output signals are connected to a single amplifier (104) to provide selected amplified audio signals to a plurality of speakers (108, 110), and also including a control, or "head unit," (106), connected with the amplifier (104) to store user-programmed balance settings for use by the amplifier (104) in amplifying the audio output signals of each of the audio sources (102), and to set, with a user interface (112), each respective balance setting of the amplified output of the amplifier (104) for each respective audio source to be reproduced by the plurality of speakers (108, 110) of the audio system.

The invention permits a user of a vehicle audio system to set his/her selected balance setting for selected audio sources, including, if desired, balance settings for different passenger categories, to store the selected balance settings for each selected audio source and to reproduce amplifier output signals of any selected audio source based on the stored balance setting.

Instead of having a single balance setting for the amplified outputs of all of a plurality of audio sources, the invention permits a system user to select a different balance setting for the reproduced outputs of each audio source, while permitting a single speaker-driving audio amplifier. *See* page 7, lines 18-19.

As described in the Summary, specification pages 2-3, a multi-channel audio system (100, 600) for a vehicle with a plurality of audio sources (102) includes a menu-driven user interface (112) for setting the speaker balance settings for each of the audio sources generating

an audio output signal. *See*, page 2, lines 3-5. The plurality of audio sources (102) may be selected from a wide range of audio sources that are capable of being placed in the vehicle. *See*, page 2, lines 5-7. The audio sources are connected to a head unit (106) and an amplifier (104). *See*, page 2, lines 7-8. The head unit (106) is the component in the vehicle that is used for audio management. *See*, page 2, lines 8-9. Software modules on the head unit (106) allow the occupant to use the audio sources located in the vehicle and manage such things as balance and volume. *See*, page 2, lines 9-11. The head unit (106) allows an occupant of the vehicle to adjust the balance settings for a plurality of speakers (108, 110) for reproduction of the audio signals of each audio source or type of audio source. *See*, page 2, lines 11-13.

The head unit (106) includes a user interface module (112) and an audio manager module (114). *See*, page 2, line 14. The user interface module (112) generates a balance setting graphical user interface ("GUI") on a display of the audio system (100, 600). *See*, page 2, lines 15-16. The balance setting GUI allows the occupant of the vehicle to adjust balance settings to be used with each audio source connected to the amplifier (104), and the audio manager module (114) is an application operable to set the balance setting in the amplifier (104) for each audio source based upon the user's predefined settings. *See*, page 2, lines 16-21.

The user interface also provides a passenger GUI that allows the user to setup the audio system (100, 600) based on a passenger information address. *See*, page 2, lines 22-23. In other words, the audio system (100, 600) allows the user to adjust the balance settings to be used based upon the location of certain types of passengers in the vehicle. *See*, page 2, lines 23-25. The user can identify interest groups (driver, co-driver, children, backseat, etc.) and set the balance settings for each of these interest groups. *See*, page 2, lines 25-27. For example, if the children normally sit in the backseat, the user can adjust the balance settings of each audio source that the

children may want to hear to reproduce audio outputs in only the rear loudspeakers (108) or only in a selected subset of loudspeakers (108, 110). *See*, page 2, lines 27-30.

The amplifier (104) is used to audibly reproduce outputs provided by the various audio sources on various combinations of loudspeakers (108, 110) that are located in the vehicle. *See*, page 2, lines 30-31. The amplifier (104) includes a balance setting circuit (116) that allows the amplifier (104) to set the balance settings of its amplified output signals that are provided by the audio sources (102). *See*, page 3, lines 1-2. The audio manager module (114) controls the balance setting circuit (116) in the amplifier (104) to operate as defined by the occupant for each audio source (102) or type of source. *See*, page 3, lines 2-4.

B. Independent Claim 1

Independent claim 1 claims an audio system (100) for use in a vehicle. *See*, page 3, lines 28-30 and application FIGS. 1 and 3. The audio system (100) includes a plurality of audio sources (102) connected to an amplifier (104). *See*, page 4, lines 9-16; page 8, lines 19-20; and FIGS. 1 and 6. The amplifier (104) includes a respective balance setting for each audio source. *See*, page 4, lines 3-5, 19-23; page 4, line 30 – page 5, line 3; and page 7, lines 18-23. The amplifier (104) is configured to provide a respective amplified audio signal to each of a plurality of speakers (108, 110), where the audio sources are operable to generate a plurality of audio output signals that are supplied to the amplifier (104). *See*, page 4, lines 6-10; page 4, line 28- page 5, line 3; and page 6, lines 15-19. In addition, the audio system (100) further includes a control unit (106) connected with the amplifier (104). *See*, page 4, lines 17-18, and FIGS. 1 and 6. The control unit (106) is configured to adjust the respective amplified audio signals for each speaker (108, 110) based on each of the respective audio sources that generate the audio output signal. *See*, page 4, lines 17-27. The control unit (106) also includes a user interface (112) for



independently setting each respective balance setting of each respective audio source. *See*, page 3, lines 27-30; page 4, lines 19-23; page 8, lines 4-8, 23-26; and FIGS. 1 and 3. The control unit (106) is further configured to adjust the balance settings based upon a user selected audio source. *See*, page 3, lines 1-4; page 4, lines 17-27; page 5, lines 17-20; page 6, lines 15-19; page 7, lines 2-5; page 8, lines 2-7; and FIGS. 1 and 3.

C. Independent Claim 24

Independent claim 24 claims an audio system (100) for a vehicle. *See*, page 3, lines 28-30 and FIGS. 1 and 3. The audio system (100) includes a plurality of audio sources (102) configured to generate a plurality of audio output signals and an amplifier (104) connected to the audio sources. *See*, page 4, lines 9-16; page 8, lines 19-20; and FIGS. 1 and 6. The amplifier (104) is configured to receive the audio output signals generated by the audio sources. *See*, page 4, lines 6-16; page 8, lines 19-20; and FIGS. 1 & 6. The audio system (100) also includes a plurality of speakers (108, 110) connected to the amplifier (104) and a head unit (106) connected to the amplifier (104). *See*, page 4, lines 6-10 and 17-18, and FIGS 1 and 6. The head unit (106) is operable to control a balance setting of the speakers (108, 110) for each respective audio source configured to generate the audio output signals, where the head unit (106) is operable to generate a user interface (112) configured to receive an audio source balance setting for each respective audio source. *See*, page 3, lines 27-30; page 4, lines 17-27; page 8, lines 4-8 and 23-26; and FIGS. 1 and 3. The head unit (106) is further configured to store each respective audio source balance setting for each respective audio source. *See*, page 4, lines 17-27.

D. Independent Claim 32

Independent claim 32 claims a method of controlling balance settings for a plurality of audio sources (102) in an audio system (100) for a vehicle. *See*, page 3, lines 27-30; page 6, lines 2-10; page 6, line 20 – page 7, line 18; page 8, line 18; and FIGS. 4 and 5. The method includes a step 400 of generating a plurality of audio output signals from a plurality of audio sources (102). *See* page 7, line 31-page 8, line 2, and FIG. 4. The method also includes a step 402 of transmitting the audio output signals from the audio sources to an amplifier (104). *See*, page 8, lines 2-4, and FIG. 4. The method further includes a step 404 of receiving selected balance settings for selected audio sources with a head unit (106) connected to the amplifier (104), and storing the selected balance settings received from the head unit (106) as the respective audio source balance settings for the selected audio sources. *See*, page 8, lines 4-6, and FIG. 4. The method then includes reproducing an audio output signal on at least two speakers (108, 110) based upon a stored selected balance setting for one of the selected audio sources. *See*, page 8, lines 6-8, and FIG. 4.

E. Independent Claim 39

Independent claim 39 claims an audio system (100) for use in a vehicle. *See*, page 3, lines 28-30, and FIGS. 1, 3, 5 and 6. The audio system (100) includes a plurality of audio sources (102) connected to an amplifier (104) that is operably coupled to a plurality of speakers (108, 110), and a control unit (106) connected to the amplifier (104). *See*, page 4, lines 6-27, and FIGS. 1 and 6. The audio system (100) also includes a passenger category selection module (602) located on the control unit (106) and configured to receive a user selected passenger category from a plurality of passenger categories. *See*, page 8, lines 9-25, and FIGS. 5 and 6. Each passenger category includes a respective balance setting for each audio source. *See*,

page 8, lines 20-26, and FIGS. 5 and 6. The audio system (100) further includes a user interface module (112) located on the control unit (106). *See*, page 8, line 18-page 9, line 6, and FIG. 6. The user interface module (112) is configured to adjust a balance setting of the plurality of speakers (108, 110) for the selected passenger category based on a respective audio source that generates an audio output signal and the user selected passenger category. *See*, page 8, line 9-page 9, line 6; and FIGS. 5 and 6.

F. Independent Claim 43

Independent claim 43 claims a method of controlling balance settings in an audio system (100) for a vehicle. *See*, page 8, lines 9-11, and FIG. 5. The method includes a step of receiving a selected passenger category selected from a plurality of passenger categories. *See*, page 8, lines 9-12, and FIG. 5. The passenger category includes a respective balance setting for each of a plurality of audio sources (102). *See*, page 8, lines 12-17, and FIG. 5. The method also includes a step 502 of receiving an adjustment for the balance setting of at least one audio source (102) for the selected passenger category. *See*, page 8, lines 9-14, and FIG. 5. The method further includes a step 504 of reproducing audio output signals based on the balance setting for each audio source (102). *See*, page 8, lines 15-17, and FIG. 5.

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1, 6-8, 10, 11, 24, 25, 28, 31-33, and 38-45, are rejected under 35 U.S.C. 102(e) as being anticipated by Yasuhara, U.S. Pat. No. 7,190,798, ("Yasuhara"). The grounds for the Examiner's rejections of the individual claims are set forth in the ARGUMENT Section VII that follows.

## VII. ARGUMENT

### A. YASUHARA FAILS TO ANTICIPATE CLAIMS 1, 6-8, 10, 11, 24, 25, 28, 31-33 and 38-45.

#### 1. Introduction

As set forth, for example, in the current version of MPEP 2131 (Rev. 6, Sept. 2007):

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 827 (1987). \* \* \* The identical invention must be shown in as complete detail as is contained in the ... claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). \* \* \*

As set forth below with respect to the individual rejected claims, Yasuhara does not disclose or teach, either expressly or inherently, the elements of Appellant's rejected claims. To the contrary, Yasuhara states his "invention relates to an entertainment system in which a driver or front passenger can control a rear audio source that provides audio and/or video for rear seat occupants," (Col. 1, lines 10-13) and discloses a vehicle entertainment system comprising a plurality of audio sources (82-85, Figure 9), a head unit 2 (illustrated in Figure 3), and a rear controller 3 (illustrated in Figure 7), "in which a front user can easily control a rear audio source for a rear user." (See Figures 1 and 9, and Col. 2, lines 16-17). For example, as disclosed in Yasuhara and illustrated in Figures 9-13, the head unit 2 includes a control switch 23 that can enable the rear controller (illustrated in Figure 7), permitting a rear user to control a selected audio source by the rear controller 3 (Col. 14, lines 15-64) and that can disable the rear controller

3, preventing a rear user, such as a small child, from operating the system and providing an audio output from the rear speakers 11 (Col. 14, line 65 – Col. 15, line 35).

Figures 10-13 diagram the state transitions for Yasuhara's entertainment system resulting from the operation of front and rear volume power switches 21 and 22 (*See* Figure 4) and the control switch 23. The remainder of Yasuhara's disclosure describes the individual components of his entertainment system, their operation and interconnections.

Yasuhara does not contain in its twenty (20) columns of description and claims, or in its thirteen (13) figures, a single reference to, or showing of, a balance setting, or a means or method for setting the balance settings of the audio outputs of his speakers (10, 11). Yasuhara does not even acknowledge the existence of balance settings, or the possibility of their selection and storage for use with individual audio sources. Yasuhara does not disclose, teach or suggest the elements and combinations of elements of Appellant's rejected claims.

For the convenience of the Board, the portions of Yasuhara cited by the Examiner to support his allegations that Appellant's claims are anticipated are set forth at TABS 1-5, attached at the end of the Appeal Brief, as follows:

TAB 1	<u>Claims 1 and 24</u> Column 8, lines 20-Column 9, line 9, and Figures 3 and 6
TAB 2	<u>Claims 1 and 24</u> Column 4, lines 10-58, and Figures 1-13
TAB 3	<u>Claims 1, 6-8, 10, 11, 24, 25, 28, 31-33, 39 and 40-45</u> Column 10, line 36 – Column 11, line 67 and FIGS. 1-3 and 7-9
TAB 4	<u>Claim 33</u> Column 6, lines 12-43, and Figure 3
TAB 5	<u>Claim 1</u> Column 6, lines 15-22 (also TAB 4) and Column 7, lines 36-52, and Figures 1 and 3

2. Yasuhara Does Not Anticipate Claims 1-11

A. The Examiner's Rejection of Claims 1-11 (and 24)

The final rejection states:

Claims 1, 6-8, 10-14, 19-25, 28, 31-33 and 38-45, 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Yasuhara (US PAT 7, 190,789).

Consider claims 1, 24, Yasuhara teaches an audio system (see fig. 9) for use in a vehicle, comprising:

a plurality of audio sources (81 in fig. 9) connected to an amplifier (89), the amplifier comprising a respective balance setting for each audio source and configured to provide a respective amplified audio signal to each of a plurality of speakers (10, 11), where the audio sources are operable to generate a plurality of audio output signals (10, 11) that are supplied to the amplifier (89); and

a control unit (80) connected with the amplifier (89), and configure [sic] to adjust the respective amplified signals for each speaker (10, 11) based on each of the respective audio sources that generates the audio output signal (see col. 8, line 20-col. 9, line 9), where the control unit (fig 9, (80)) includes a user interface (28, 29) for independently setting each respective balance setting of each respective audio source (see col. 4, line 10-58), where the control unit (2) is further configure [sic] to adjust the balance settings based upon a user select audio source (see col. 10 line 36-col. 11 line 67).

Consider claim [sic] 6-8 Yasuhara teaches that the control unit (see fig. 9 (80)) includes an audio manager module operable to control the balance setting of the amplifier connected to the speakers based on the respective balance setting for each audio source (see col. 10 line 36-col. 11 line 67); and the control unit (see fig. 9 (80)) includes a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective the audio sources (see col. 10 line 36-col. 11 line 67); and the control unit (see fig. 9 (80)) includes a user interface module operable to receive a user adjustment of the respective balance setting of the user selected audio source for each respective audio source (see col. 10 line 36-col. 11 line 67).

Consider claim [sic] 10-11 and 31 Yasuhara teaches that the control unit (see fig. 9 (80)) is configured to store the respective balance setting for each respective audio source (see col. 10 line 36-col. 11 line 67); and the user selected audio source comprises at least one audio source from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player, and a text-to-speech system (see col. 10 line 36-col. 11 line 67).

b. Appellant's Responses to the Allegations in the Final Rejection

1. Claim 1 (and 24)

Claim 1 is patentably distinguished from Yasuhara by the following recited element:

a plurality of audio sources connected to an amplifier, the amplifier comprising a respective balance setting for each audio source and configured to provide a respective amplified audio signal to each of a plurality of speakers, where the audio sources are operable to generate a plurality of audio output signals,

While Yasuhara's disclosed vehicle entertainment system includes a plurality of audio sources operable to supply audio output signals to a plurality of speakers. Yasuhara does not connect the plurality of audio sources, and supply the plurality of audio signals they generate, to a single amplifier comprising a respective balance setting for each audio source and configured to provide a respective amplified audio signal to each of the plurality of speakers, as recited in claim 1.

The Examiner, referring to Figure 9 of Yasuhara, refers to the plurality of audio sources 81 connected to an amplifier 89. Yasuhara discloses, however, four amplifiers 89, one for each of the four speakers 10, 11. The Examiner alleges further that the "amplifier 89" comprises a respective balance setting for each audio source, but there is no disclosure in Yasuhara to support this statement. The only reference to the four amplifiers 89 is at Col. 10, lines 56-59, "The volume control part 87 amplifies the audio signal in accordance with the volume signal and outputs the amplified signal to the front and rear signals 10 and 11 via amplifiers 89." Nothing in Yasuhara discloses or teaches that the amplifiers 89 comprise a balance setting, much less a balance setting for each audio source, and/or that the amplifiers 89 are configured to supply a respective amplified audio signal to each of a plurality of speakers (10, 11).

Claim 1 is further distinguished from Yasuhara by the following additional recited element:

a control unit connected with an amplifier, and configured to adjust the respective amplified audio signals for each speaker based on each of the respective audio sources that generate the audio output signal, where the control unit includes a user interface for independently setting each respective balance setting of each respective audio source, where the control unit is further configured to adjust the balance setting based upon a user selected audio source.

The Examiner alleges that control unit 80 of Yasuhara is connected with the "amplifier" 89, and configured to adjust the respective audio signals for each speaker (10, 11) based on each of the respective audio sources that generates the audio output signal, referring to Col. 8, line 20-Col. 9, line 9 (TAB 1), and further alleges that the control unit 80 includes a user interface for independently setting each respective balance setting of each respective audio source, referring to Col. 4, lines 10-58 (TAB 2).

Contrary to the Examiner's allegations, there is nothing in Yasuhara that discloses or teaches that controller 80 receives balance setting information for each of the respective audio sources or is capable of adjusting the respective audio signals for each speaker (10, 11) based on each respective audio source that generates the audio output signal. The portion of Yasuhara referred to by the Examiner, Col. 8, line 20 – Col. 9, line 9, (TAB 1), contains nothing supporting the Examiner's allegations. Appellant respectfully submits that if the Board reads Col. 8, line 20 – Col. 9, line 9, (TAB 1), they will confirm that it offers no support for the Examiner's allegations.

The Examiner further erroneously indicates that Yasuhara discloses that control unit (fig. 9 (80)) includes a user interface (28, 29) for independently setting each respective balance setting of each respective audio source, referring to Col. 4, lines 10-58) (TAB 2). As set forth in Yasuhara at Col. 8, lines 37-58, and shown in Figures 3 and 5, the front display part 28 shows



the kind and operating state of the front audio source, and the rear display part 29 shows the kind and state of the rear operating state of the rear audio source. As clear from Figure 3 and Figure 5, there are no balance control inputs on head unit 2 (Figure 3) or on rear controller 3 (Figure 5). Col. 4, lines 10-58 (TAB 2), to which the Examiner refers as support for his contentions, in fact, contains nothing supporting his allegations, as the Board can confirm by reading this portion of Yasuhara, at TAB 2.

Finally, the Examiner erroneously contends that control unit (80) is further configured to adjust the balance settings based upon a user selected audio source. The Examiner refers to Col. 10, line 36-Col. 11, line 67 (TAB 3), as supporting his contention; however, head unit 2 comprising control unit 80 is shown in Figure 3 and its operations are described in detail at Col. 6, line 13 – Col. 9, line 42, and there is no showing in Figure 3, and no mention in Col. 6, line 13 – Col. 9, line 42, of control unit (80) being configured to, or capable of, adjusting balance settings based upon a user selected audio source. The Board can confirm by a review of Col. 10, line 36 – Col. 11, line 67 at TAB 3, that it contains no disclosure or teaching of the recited elements of claim 1 (and claim 24).

Responses to the Examiner's Remarks Following Appellant's Request for Reconsideration

In the Examiner's response to Appellant's request for reconsideration in the final rejection, the Examiner stated,

Applicant argued in substance that Yasuhara does not teach a respective balance setting for each respective audio source and a user interface for independently setting, as set forth in claim 1 (Remarks page 15, 2nd-4th paragraphs).

The examiner respectfully disagrees. Yasuhara teaches a respective balance setting for each respective audio source in that, as shown in figure 9 and the denoting text, each of the audio sources 82, 83, 84 or 85 is configured to contribute to the output of speaker 10 and the output of speaker 11 in a particular manner/combination, namely, "a"

respective balance setting. It is noted that claim 1 does not require details of the respective balance setting such as the percentage [sic] contribution from each of the audio sources or the percentage contribution to each of the speakers. Thus the argument is not persuasive. A user interface for independently setting is met by the audio source control button of Yasuhara which is the collective name for 21, 22, 23, 24 and 25 (see the denoting text in, for example, col. 6, lines 15-22 and col. 7, lines 36-52). Each of the user selectable configurations (such as the ones discussed in col. 7, lines 36-52) represents an independent balance setting for each respective audio source. In the Remarks, sections A.2-A.6 and B.1 to B.5, applicant basically referred to the argument on the respective balance setting of claim 1. Note the discussion above for the examiner's response. For these reasons, applicant's arguments are not persuasive.

Contrary to the Examiner's contention, Yasuhara does not disclose or teach a respective balance setting for each respective audio source. As indicated above, Yasuhara does not contain a single reference to, or showing of, a balance setting, or a means or method for setting balance settings of the audio sources and does not disclose the elements recited in the rejected claims.

The Examiner states, "each of the audio sources 82, 83, 84 or 85 is configured to contribute to the output of speaker 10 and speaker 11 in 'a' particular manner/combination, namely, a "respective balance setting." If this statement was intended to convey that each audio source includes a respective balance setting, then it is not correct. There is no disclosure in Yasuhara that the audio sources of Yasuhara have any balance settings or means of setting the balance of speakers 10, 11. If the Examiner was trying to make some other point, the statement is too unclear to provide notice to Appellant of the Examiner's intended meaning.

The Examiner further states "claim 1 does not require details of the respective balance setting such as the percentage contribution from each of the audio sources or the percentage contribution to each of the speakers." This statement is also unclear. It is clear from claim 1 that in the invention the balance settings are adjustable and adjusted for each of the respective audio sources, and the control unit adjusts the balance setting of the amplifier based on a user selection for each audio source. Claim 1 does not require details of the respective balance settings such as

the percentage contribution from each of the audio sources, or the percentage contribution to each of the speakers, to patentably distinguish Appellant's invention from Yasuhara.

Appellant respectfully submits that its prior presentations to the Examiner should have been persuasive.

The Examiner also states, "A user interface for independently setting is met by the audio source control button of Yasuhara which is the collective name for 21, 22, 23, 24 and 25 (see the denoting text in, for example, col. 6, lines 15-22 and col. 7, lines 36-52) (set forth at TAB 5). Each of the user selectable configurations (such as the ones discussed in col. 7, lines 36-52) represents an independent balance setting for each respective audio source."

The text of Yasuhara at Col. 6, lines 15-22 indicates that elements 21-25 of Yasuhara may be collectively referred to as an audio source control button, but Col. 7, lines 36-52 only indicates that "audio source selection buttons 24 are used to select an audio source," and indicates what can comprise the audio source.

The Examiner's alleged "user selectable configurations (such as the ones discussed in Col. 7, lines 36-52)" are merely the selection of one of the audio sources of Yasuhara for operation. There is nothing at Col. 7, lines 36-52 disclosing or teaching an independent balance setting for each respective audio source, or the distinguishing elements of claim 1, as alleged by the Examiner. Review of the passages of Yasuhara referred to by the Examiner at TAB 5 will confirm that they do not disclose or teach the elements and subject matter of claim 1.

In conclusion, Yasuhara does not disclose, teach or suggest the recited elements and subject matter of claim 1 (or claim 24) and the claims dependent thereon, which are patentably distinguished from Yasuhara. The final rejections of claim 1 (and claim 24) and the claims

dependent thereon should be reversed, and claim 1 and the claims dependent thereon should be allowed.

Claims 6-8, 10 and 11

In the rejections of claims 6-8, 10 and 11, the Examiner cites the same disclosure portion of Yasuhara, i.e., Figure 9, controller 80, and Col. 10, line 36- Col. 11, line 67, which are set forth at TAB 3.

Claim 6

Dependent claim 6 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 1, its recitation, "the control unit includes an audio manager module operable to control the balance settings of the amplifier connected to the speakers based on the respective balance setting for each audio source."

The Examiner erroneously alleges that "Yasuhara teaches that the control unit (see fig. 9 (80)) includes an audio manage module operable to control the balance setting of the amplifier connected to the speakers based on the respective balance setting for each audio source," referring to Figure 9 and Col. 10, line 36 – Col. 11, line 67 (TAB 3). As set forth above, Yasuhara does not disclose or teach a system with an amplifier connected to speakers and controllable to provide an amplified audio source output with a balance setting based on a user selection of an audio source, and does not disclose or teach a control unit including an audio manager module operable to control the balance settings of the amplifier connected to the speakers based on the respective balance setting for each audio source. Contrary to the Examiner's allegations, Yasuhara does not disclose that his controller 80 includes Appellant's claimed audio manager module, or is, in any way, operable to control the balance setting of the

amplifiers 89 connected to speakers 10, 11. Figure 9 and Yasuhara's description at Col. 10, lines 36 – Col. 11, line 67 (TAB 3), provides no disclosure or teaching of the recited subject matter of claim 6, as the Board can confirm by reviewing the attached TAB 3 content.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of claim 6, which is further patentably distinguished from Yasuhara. The final rejection of claim 6 should be reversed, and claim 6 should be allowed.

#### Claim 7

Dependent claim 7 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 1, its recitation "the control unit includes a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective audio sources." The recited means of claim 7 is described in Appellant's specification at page 2, lines 11-30; page 4; lines 17-23; page 5, lines 4-14; and page 5, line 22- page 9, line 6, and is shown in Figures 1-6.

The Examiner erroneously alleges that "the control unit (see fig. 9 (80)) includes a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective audio sources, referring to col. 10, line 36-col. 11, line 67 (TAB 3). As set forth above, Yasuhara does not disclose or teach, and does not contain a single reference to or showing of, a balance setting, does not disclose or teach a means for adjustment operable to allow user to independently adjust the balance setting of each of the respective audio sources, and certainly does not disclose or teach the corresponding structure and material described in the specification or its equivalents. Contrary to the Examiner's allegations, Yasuhara does not disclose that his controller 80 includes a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective audio sources. Figure 9 and Yasuhara's description

at Col. 10, line 36 – Col. 11, line 67 (TAB 3), provides no disclosure or teaching of the subject matter of claim 7, including a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective sources, as can be confirmed by the Board's review of the content at TAB 3.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of claim 7, which is further patentably distinguished from Yasuhara. The final rejection of claim 7 should be reversed, and claim 7 should be allowed.

#### Claim 8

Dependent claim 8 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 1, its recitation "the control unit includes a user interface module operable to receive a user adjustment of the respective balance setting of the user selected audio source for each respective audio source."

The Examiner erroneously alleges that "the control unit (see fig. 9 (80)) includes a user interface module operable to receive a user adjustment of the respective balance settings of the user selected audio source for each respective audio source referring to (as he did with respect to claims 6 and 7), Figure 9 and Col. 10, line 36 – Col. 11, line 67, (TAB 3). In his rejections of claims 1 and 24, the Examiner referred to Yasuhara's elements 28, 29, as "a user interface (28, 29) for independently setting each respective balance setting of each respective audio source," referring to Col. 4, lines 10-58 (TAB 2); however, to the contrary, Yasuhara, at Col. 8, lines 37-58 and in Figures 3 and 5, indicates that "The front display part 28 shows the kind and operating state of the front audio source" and "The rear display part 29 shows the kind and operating state of the rear audio source." (Col. 8, lines 38-41). As clear from Figures 3 and 5, there are no

balance control inputs on the head unit 2 shown in Figure 3, or on the rear controller 3 shown in Figure 5.

In his rejection of claim 8, the Examiner refers to "(fig. 9 (80)), and Col. 10, line 36-Col. 11, line 67 (TAB 3), as disclosing "a user interface module operable to receive a user adjustment of the respective balance setting of the user selected audio source for each respective audio source;" however, as indicated above in the Appellant's response to the rejection of claims 6 and 7, the content of Col. 10, line 36 – Col. 11, line 67 (TAB 3) at Col. 11, lines 1-5, relates to the front and rear display parts 28, 29 and their showings of the operating states of the front and rear controllers. And, as apparent from Figures 3, 5, and 7, there is no showing of an interface module and no showing of any user interface operable to receive a user adjustment of the respective balance setting of the user selected audio source for each respective audio source, as recited in claim 8.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of claim 8, which is further patentably distinguished from Yasuhara. The final rejection of claim 8 should be reversed, and claim 8 should be allowed.

#### Claim 10

Dependent claim 10 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 1, its recitation "the control unit is configured to store the respective balance setting for each respective audio source."

The Examiner erroneously alleges "Yasuhara teaches that the control unit (see fig. 9 (80)) is configured to store the respective balance setting for each respective audio source, (see col. 10, line 36-col. 11, line 67," (TAB 3). To the contrary, Yasuhara does not disclose or suggest balance settings of his audio sources, or storage of balance settings for each of his audio sources,

or a control configured to store balance settings for his respective audio sources. As set forth above, Yasuhara does not contain a single reference to or showing of balance settings for his audio sources, does not even acknowledge the existence of balance settings, or the possibility of their storage for use with individual audio sources. Yasuhara's Figure 9 and description at Col. 10, line 36 – Col. 11, line 67 (TAB 3) provide no disclosure or teaching of the subject matter of claim 10 as the Board can confirm by reviewing its content at TAB 3.

Yasuhara does not disclose, teach or suggest the recited elements or the subject matter of claim 10, which is further patentably distinguished from Yasuhara. The final rejection of claim 10 should be reversed, and claim 10 should be allowed.

#### Claim 11

Dependent claim 11 recites, in addition to the allowable subject matter of independent claim 1 that "the user selected audio source comprises at least one audio source from a group of audio sources, including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player and a text-to-speech system." Yasuhara discloses as part of his entertainment system some but not all of the subject matter of claim 11, failing to disclose such audio sources, as, for example, a navigation system, a remote terminal, a radio data service tuner, and various others of the audio sources recited in claim 11. As a result, claim 11 is not anticipated by Yasuhara's disclosure and teaching. In addition, claim 11 is not, in any event, anticipated by Yasuhara because of, at least, the subject matter recited in claim 1 from which it depends.

Yasuhara does not disclose and teach the recited elements and subject matter of claim 11, which is patentably distinguished from Yasuhara because of at least the subject matter of claim



1, and accordingly, the final rejection of claim 11 as anticipated should be reversed, and claim 11 should be allowed.

B. YASUHARA FAILS TO ANTICIPATE CLAIMS 24-31

a. The Examiner's Final Rejection of Claims 24-31

Claim 24

Claim 24 is patentably distinguished from Yasuhara by at least the recitation, "a head unit connected to the amplifier operable to control a balance setting of the speakers for each respective audio source configured to generate the audio output signals, where the head unit is operable to generate a user interface configured to receive an audio source balance setting for each respective audio source, and further configured to store each respective audio source balance setting for each respective audio source."

As indicated in the recitation of the Examiner's final rejections of the claims 1-11 set forth, *supra*, on page 14 of the Brief, claim 24 is rejected on identically the same basis as claim 1.

In response to the rejection of claim 24, Appellant incorporates herein and submits its response to the rejections of claim 1, set forth above on pages 15 to 19 of this Brief, and respectfully submits that Yasuhara does not disclose or teach or suggest the recited elements and the subject matter of claim 24 and the claims dependent thereon, which are patentably distinguished over Yasuhara.

There is no disclosure or teaching in Yasuhara, including the portions set forth at TABS 1-5, of a controller (80) or head unit 2, which is (1) operable to control a balance setting of the speakers for each respective audio source or (2) operable to generate a user interface

configured to receive an audio source balance setting for each respective audio source, or (3) configured to store each respective audio source balance setting for each respective audio source.

The final rejection of claims 24, 25 and 28 and 31 should be reversed, and claim 24 and the claims dependent thereon should be allowed.

Claims 25 and 28

Claim 25

Dependent claim 25 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of claim 24, its recitation "the amplifier includes a balance setting circuit and the amplifier is configured to be controlled by the head unit."

In rejecting claims 25 and 28, the Examiner states "Yasuhara teaches that the audio system of the amplifier includes a balance setting circuit and the amplifier is configured to be controlled by the head units (see figs. 1-3, 7-9 and see col. 10, line 36-col. 11, line 67);" and "the audio system of the head unit includes an audio manager module operable to control the amplifier based upon the audio source balance setting for each respective audio source (see figs. 1-3, 7-9 and see col. 10, line 36-col. 11, line 67)." (Examiner's cited disclosure is at TAB 3). Yasuhara does not disclose an amplifier including a balance setting circuit and configured to be controlled by the head unit. Yasuhara shows four amplifiers 89; two front speakers 10 and two rear speakers 11, with no individual control of the four amplifiers, and no disclosure that any of the four amplifiers includes a balance setting circuit, or is configured to be controlled by a head unit. The only reference to the amplifiers 89 in Yasuhara is at Col. 10, lines 55-59, "The volume control part 87 amplifies the audio signal in accordance with the volume signal and outputs the amplified signal to the front and rear speakers 10 and 11 via amplifiers 89." As indicated in Figure 9, the only connections to the speakers (10, 11) comprise two lines running from the

volume control 87 through the amplifiers 89 to the front speakers 10, and two lines running from the volume control 87 through off-on switch 93 to the amplifiers 89 and from the amplifiers 89 to the rear speakers 11. Figures 1-3 and 7-9 include no showing of any means for entering a balance setting. In addition, Col. 10, line 37 – Col. 11, line 67 (TAB 3) does not include any reference to a balance setting or balance setting circuit or an amplifier configured to be controlled by a head unit, and provides no support for the rejection of claim 25.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of claim 25, which further patentably distinguishes the subject matter of claim 24 from Yasuhara. The final rejection of claim 25 should therefore be reversed, and claim 25 should be allowed.

#### Claim 28

Dependent claim 28 is patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 24, its recitation "the head unit includes an audio manager module operable to control the amplifier based on the audio source balance setting for each respective audio source."

The Examiner alleges that Yasuhara teaches "the audio system of the head unit includes an audio manager module operable to control the amplifier based upon the audio source balance setting for each respective audio source (see figs. 1-3, 7-9 and see col. 10, line 36-col. 11, line 67)." (Examiner's cited disclosure is at TAB 3). Yasuhara does not disclose a head unit, or any controller operable to control an amplifier based on the audio source balance setting for each respective audio source.

As indicated above, Yasuhara illustrates four amplifiers 89 in Figure 9 but no audio manager module operable to control the amplifiers 89 based on audio source balance setting for each respective audio source. Figures 1-3 and 7-9 contain no showing of a balance setting

control and Yasuhara's disclosure at Col. 10, line 36 – Col. 11, line 67, (TAB 3) contains no reference to balance settings, or any means for controlling balance settings or any means for controlling an amplifier based on an audio source balance setting for each respective audio source.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of claim 28, which further patentably distinguishes the invention of claim 24 from Yasuhara. The final rejection of claim 28 should be reversed, and claim 28 should be allowed.

Claim 31

Claim 31 has been rejected on the same basis as claim 11, and Appellant hereby incorporates herein its response to the rejection of claim 11 and the same conclusion and request.

C. YASUHARA FAILS TO ANTICIPATE CLAIMS 32, 33 AND 38

1. The Examiner's Final Rejection of Claims 32, 33 and 38

The final rejection of claim 32 states:

Consider claim 32 Yasuhara teaches that a method of controlling balance settings for a plurality of audio sources in an audio system for a vehicle, comprises comprising [sic]:

generating a plurality of audio output signals (see fig. 9 (10, 11)) from a plurality of audio sources (81); transmitting the audio output signals from the audio sources to an amplifier (89); receiving selected balance settings for selected audio sources with a head unit (28) connected to the amplifier (89); storing the selected balance settings received from the head unit as the respective audio source balance settings for the selected audio sources; and

reproducing an audio output signal on at least two speakers (10, 11) based upon a stored selected balance setting for one of the selected audio sources (see figs 1-3, 7-9 and see col. 10 line 36-col. 11 line 67).

2. Appellant's Responses to the Allegations of the Final Rejection

Claim 32

Claim 32 is directed to a method of controlling balance settings for a plurality of audio sources in an audio system for a vehicle. Claim 32 is patentably distinguished from Yasuhara by each and every one of the following steps:

"receiving selected balance settings for selected audio sources with a head unit connected to an amplifier,"

and/or by

"storing the selected balance setting received from the head unit as the respective source balance settings for the selected audio sources,"

and/or by

"reproducing an audio signal on at least two speakers based on a stored selected balance setting for one of the selected audio sources."

For the reasons set forth above, Yasuhara does not disclose a method of controlling balance settings for a plurality of audio sources in a vehicle audio system. Claim 32 is patentably distinguished from Yasuhara by at least the step "receiving selected balance settings for selected audio sources with a head unit connected to the amplifier," referring to the amplifier that produces amplified audio output signals from the audio sources.

While Yasuhara discloses generating a plurality of output signals from a plurality of audio sources and transmitting the audio output signals from the audio sources to an amplifier, there is nothing in Yasuhara that discloses the step of "receiving selected balance settings from selected audio sources with a head unit connected to an amplifier." In his final rejection, the Examiner states Yasuhara teaches "receiving selected balance settings for selected audio sources

with a head unit (28) connected to the amplifier (89)." What the Examiner refers to as "head unit (28)" is the front display part 28, which shows the operating states of the front audio source, in accordance with control signals from controller 80. (See Col. 8, lines 36-39, and Col. 11, lines 1-5.) As shown in Figures 3 and 5, element 28 is a display of the operating state of the front audio source and provides no means for receiving selected balance settings for selected audio sources. In fact, as set forth above, there is no disclosure anywhere in Yasuhara of any means for receiving selected balance settings for selected audio sources.

Claim 32 is further distinguished from Yasuhara by the step of "storing the selected balance settings received from the head unit as respective audio source balance settings for the selected audio sources." As set forth above, Yasuhara includes no disclosure or teaching of any means for selecting balance sources for selected audio sources, and Yasuhara includes no disclosure or teaching of storing selected balance settings. The Examiner contends that Yasuhara teaches "storing the selected balance settings received from the head unit as the respective audio source balance settings for the respective selected audio sources." The Examiner points to nothing in Yasuhara to support his contention, or which discloses or teaches storing selected balance settings as a respective audio source balance settings for selected audio sources because there is nothing in Yasuhara that the Examiner can point to that supports his contention.

Claim 32 is still further distinguished from Yasuhara by the step of "reproducing an audio output signal on at least two speakers based upon a stored selected balance setting for one of the selected audio sources." The Examiner alleges in his rejection that Yasuhara teaches, "reproducing an audio output signal on at least two speakers (10, 11) based upon a stored selected balance setting for one of the selected audio sources. (see figs. 1-3, 7-9 and see col. 10, line 36 - Col. 11, line 67)" (Examiner's cited disclosure is at TAB 3).

As indicated above, the Examiner has cited no disclosure because Yasuhara contains no disclosure of storing selected balance settings for the selected audio sources, and Yasuhara cannot therefore disclose reproducing a stored selected balance setting for one of the selected audio sources. As in previous rejections, the Examiner referred to figures 1-3 and 7-9, and Col. 10, line 36 – Col. 11, line 67 (TAB 3). A study of Yasuhara's disclosure at TAB 3 will confirm that the Examiner has no support for his final rejection of claim 32 (or any of the other pending claims).

Yasuhara does not disclose, teach or suggest the recited elements and subject matter of claim 32 and the claims dependent thereon, which are patentably distinguished from Yasuhara. The final rejection of claim 32 and the claims dependent thereon should be reversed, and claim 32 and the claims dependent thereon should be allowed.

#### Claim 33

Dependent claim 33 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 32, its recitation "the head unit includes a graphical user interface configured to receive a stored balance setting of a selected audio source from an occupant of the vehicle, where each audio source can be associated with a respective audio source balance setting."

The Examiner alleges, in rejecting claim 33, that "Yasuhara teaches that the head unit (see fig. 3) includes a graphical user interface configured to receive a selected balance setting of a selected audio source from an occupant of the vehicle where each audio source can be associated with a respective audio source balance setting (see col. 6 line 12-43)." (Examiner's cited disclosure is at TAB 4). Figure 3 does not illustrate or disclose a graphical user interface configured to receive a selected balance setting of a selected audio source from an occupant of

the vehicle, or that each audio source can be associated with the respective audio balance settings. The only showings of figure 3 that can be interpreted as graphical user interfaces are the front display part 28 and the rear display part 29, which show the operating states of the front and rear audio sources (see Yasuhara, Col. 8, line 37-47 and Col. 11, lines 1-5) but are not configured to receive, and provide no means to receive, a balance setting of any type. In further support of his rejection, the Examiner cites Figure 3 and Col. 6, lines 12-43, which states:

Head Unit

FIG. 3 shows an operating panel of the head unit 2. The head unit 2 comprises a volume/power switch 21, a rear power switch 22, a control switch 23, audio source selection buttons 24, and audio source operating buttons 25. These buttons, including the audio source selection buttons 24 and audio source operating buttons 25, which define control of the audio sources may be collectively referred to as an audio source control button.

The volume/power switch 21 includes a function of switching the power of the entertainment system 1 between "on" and "off." The volume/power switch 21 also includes a function of adjusting the volume of the front and rear speakers 10 and 11 (FIG. 1). Specifically, every time the volume/power switch is pressed, the power of the entertainment system 1 is switched between on and off. In addition, by turning the volume/power switch 21 clockwise, the volume increases. By turning the volume/power switch counterclockwise, the volume decreases.

The rear power switch 22 is a switch for switching the power of a rear power system between "on" and "off." Here, the rear system comprises the rear controller 3, display device 5, external input terminal unit 6, and rear control functions that are provided by the head unit 2. The rear control functions of the head unit 2 include, for example, a function of displaying some indication in a rear display part 29. The rear power switch 22 enables activation and deactivation of the rear system to be operated by a front user. Thus, a front user can deactivate the rear system when, for example, a rear user falls asleep. (at TAB 4)

Col. 6, lines 12-33, does not disclose any means to receive a selected balance setting of a selected audio source from an occupant of a vehicle, or where each audio source can be associated with the respective balance setting.



Yasuhara does not disclose, teach or suggest the recited steps and subject matter of claim 33, which is further patentably distinguished from Yasuhara. The final rejection of claim 33 should be reversed, and claim 33 should be allowed.

Claim 38

Claim 38 has been rejected on the same basis as claim 11, and Appellant hereby incorporates herein its response to the rejection of claim 11 and the same conclusion and request.

D. YASUHARA FAILS TO ANTICIPATE CLAIMS 39-42

1. The Examiner's Final Rejections of Claims 39-42

Consider claim 39 Yasuhara teaches that an audio system for use in a vehicle comprising:

- a plurality of audio sources (see fig. 9 (81)) connected to an amplifier operably coupled to a plurality of speakers (10, 11);

- a control unit (80) connected to the amplifier;

- a passenger category selection module (see fig. 3 (29)) located on the control unit (29 in fig. 3) and configured to receive a user selected passenger category from a plurality of passenger categories, and each passenger category includes a respective balance setting for each audio source (such as, the rear sit passenger turns on DVD and they don't want to disturb the driver. The back sit passenger turns off the rear and turns the headphone) [sic]; and

- a user interface module located on the control unit (see fig. 3), and configured to adjust a balance setting of the plurality of speakers for the selected passenger category based on a respective audio source that generates an audio output signal and the user selected passenger category (see figs 1-3, 7-9 and see col. 10 line 36-col. 11 line 67).

2. Appellant's Response to the Allegations of the Final Rejection

Claim 39

Claim 39 is distinguished from Yasuhara by at least the following recited elements, "a control unit connected to the amplifier."

In the final rejection, the Examiner refers to the control unit 80 connected to the "amplifier." But as is clear from Figure 9, there are no connections from control unit 80 to

Yasuhara's four amplifiers 89 that permit any adjustment of the balance settings of any of the amplifiers 89.

Claim 39 is further distinguished from the disclosure of Yasuhara by the recitation "a passenger category selection module located on the control unit and configured to receive a user selected passenger category from a plurality of passenger categories, and each passenger category includes a respective balance setting for each audio source."

In his rejection, the Examiner refers to fig. 3 (29) as representing a passenger category selection module located on a control unit (29 in fig. 3) and configured to receive a user selected passenger category from a plurality of passenger categories. As set forth above, element 29 of Figure 3 is a rear display unit which shows the operating state of the rear audio sources. (Col. 8, lines 37-41, Col. 11, lines 1-5). Thus, element 29 of Yasuhara, as alleged in a final rejection, does not comprise a passenger category selection module configured to receive a user selected passenger category from a plurality of passenger categories. On the other hand, controller 80 of Yasuhara includes a control switch 23 which permits a user to reproduce outputs of the audio sources in either the front seats, the rear seats or both, which may be considered passenger category selection. However, as set forth above, there is no disclosure in Yasuhara of any means permitting the selection or storage of a respective balance setting for each audio source for each passenger category, and claim 39 is patentably distinguished from Yasuhara, in any event, by its inclusion in the recitation above of a passenger category selection module where each passenger category includes a respective balance setting for each audio source.

Claim 39 is still further patentably distinguished from Yasuhara by its recitation "a user interface module located on a control unit and configured to adjust a balance setting of the

plurality of speakers for the selected passenger category based on a respective audio source that generates an audio output signal and the user's selected passenger category."

The Examiner alleges that Yasuhara teaches "a user interface module located on the control unit (see fig. 3), and configured to adjust a balance setting of the plurality of speakers for the selected passenger category based on a respective audio source that generates an audio output signal and a user selected passenger category (see figs. 1-3, 7-9 and see col. 10, line 36 – col. 11, line 67)."

Figure 3 and the head unit are described at Col. 6, line 12 – Col. 9, line 42, but Yasuhara discloses nothing in Col. 6, lines 15-Col. 9, line 43 that discloses "a user interface module located on the control unit and configured to adjust a balance setting of the plurality of speakers for the selected passenger category based on a respective audio source that generates an audio output signal and the user selected passenger category." As indicated previously, the operating panel of head unit 2 shown in Figure 3 neither illustrates nor discloses any means to adjust the balance setting of the plurality of speakers based on a respective audio source and the user selected passenger category. As set forth above, Yasuhara does not disclose anywhere the adjustments of balance settings of speakers based on either a respective audio source or a user selected passenger category.

In an attempt to support his final rejection, the Examiner refers again to Figures 1-3, 7-9 and Col. 10, line 36 – Col. 11, line 67 of Yasuhara (which is TAB 3). A review of Figures 1-3, 7-9 and Col. 10, line 36 – Col. 11, line 67, by the Board will confirm that the cited portions of Yasuhara do not support a rejection of claim 39.

Yasuhara does not disclose, teach or suggest the recited elements and subject matter of independent claim 39 and the claims dependent therefrom, which are patentably distinguished

from Yasuhara. The final rejection of claim 39 should be reversed, and claim 39 should be allowed.

Claims 40-42

The Examiner's Final Rejection of Claims 40-42

Consider claims 40-42 Yasuhara teaches that an audio manager module configured to control the amplifier to audibly reproduce the audio output signal in a predetermined number of speakers based upon the balance setting for each of the audio sources (see fig. 9 and see col. 10 line 36-col. 11 line 67); and the passenger category selection module is operable to generate a balance setting graphical user interface configured to receive a balance setting for each respective audio source for each respective passenger category (see figs. 1-3 and 7-9 and see col. 10 line 36-col. 11 line 67); and the passenger category maybe [sic] selected from a grouper [sic] passenger categories include [sic] a driver category (such as AM-FM radio), a co-driver category (such as, CD), a backseat passenger category (such as DVD), and a children category (video game and see figs. 1-3, 7-9 and col. 10, line 36-col. 11, line 67).

Claim 40

Dependent claim 40 is patentably distinguished from Yasuhara by, in addition to the allowable subject matter of independent claim 39, its recitation "an audio manager module configured to control the amplifier to audibly reproduce the audio output signal in a predetermined number of speakers based upon the balance setting for each of the audio sources."

The Examiner alleges that Yasuhara teaches "an audio manager module configured to control the amplifier to audibly reproduce the audio output signal in a predetermined number of speakers based upon the balance setting of each of the audio sources, (see fig. 9 and col. 10, line 36 – col. 11, line 67)." (Examiner's cited disclosure is presented at TAB 3). As set forth above, Yasuhara does not disclose a system with an amplifier connected to speakers and controllable to audibly reproduce an amplified audio output signal in a predetermined number of speakers based upon the balance setting of each of the audio sources. Contrary to the Examiner's allegations, Yasuhara does not disclose or teach in Figure 9, or in Col. 10, line 36 – Col. 11, line 67, (TAB 3)

an audio manager module configured to control the amplifier and audibly reproduce an audio output signal in a predetermined number of speakers based on the balance setting of each of the audio sources. Figure 9 and Yasuhara's description at Col. 10, line 36 – Col. 11, line 67, cited by the Examiner, includes no disclosure or teaching of the subject matter of claim 40, as the Board can confirm by reviewing the Examiner's cited Yasuhara disclosure at TAB 3. Yasuhara does not disclose or teach an audio manager module, or an amplifier controlled to audibly reproduce an audio output signal based upon the balance setting of each of the audio sources, or include a single reference to or showing of a balance setting, or a means or method for setting of balance settings of the audio output signals of his speakers. Yasuhara does not even acknowledge the existence of balance settings or the possibility of their selection and storage for use with individual audio sources.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of dependent claim 40, which is further patentably distinguished from Yasuhara. The final rejection of claim 40 should be reversed, and claim 40 should be allowed.

#### Claim 41

Dependent claim 41 is further patentably distinguished from Yasuhara by, in addition to the allowable subject matter of claim 39, its recitation "the passenger category selection module is operable to generate a balance setting graphical user interface configured to receive a balance setting for each respective audio source for each respective passenger category."

The Examiner alleges that Yasuhara teaches "the passenger category selection module is operable to generate a balance setting graphical user interface configured to receive a balance setting for each respective audio source for each respective passenger category (see figs. 1-3, 7-9 and see col. 10, line 36 – col. 11, line 67." As with his prior rejections, the Examiner again

refers to Figures 1-3, 7-9 and Col. 10, line 36 – Col. 11, line 67 for support of his rejection of claim 41. A review of Figures 1-3 and 7-9 and Col. 10, line 36-Col. 11, line 67 (at TAB 3) will confirm there is no disclosure or teaching of a balance setting graphical user interface configured to receive a balance setting for each respective audio source for each respective passenger category. As set forth above, Yasuhara fails to disclose any passenger category selection module operable to generate a balance setting graphical user interface, or operable to receive a balance setting for each respective audio source or for each respective audio source for a respective passenger category.

Yasuhara does not disclose, teach or suggest the recited elements or subject matter of claim 41, which is further patentably distinguished from Yasuhara. The final rejection of claim 41 should be reversed, and claim 41 should be allowed.

#### Claim 42

Dependent claim 42 recites, in addition to allowable subject matter of independent claim 39, "the passenger categories include a driver category, a co-driver category, a backseat passenger category, and a children category.

The Examiner alleges that Yasuhara teaches "the passenger category may be selected from a grouper [sic] passenger categories include [sic] a driver category (such as AM-FM radio), a co-driver category (such as, CD), a backseat passenger category (such as DVD), and a children category (video game and see figs. 1-3, 7-9 and see col. 10, line 36-col. 11, line 67."

Dependent claim 42 should be allowable by virtue of its dependence from allowable claim 39.

E. YASUHARA FAILS TO ANTICIPATE CLAIMS 43-45

1. The Examiner's Final Rejections of Claims 43-45

Claims 44-45 they are essentially similar to Claims 40-41 and are rejected for the reason stated above apropos to claims 41-42.

Consider claim 43 Yasuhara teaches that a method of controlling balance settings in an audio system for a vehicle, comprising: [sic]

receiving a selected selecting [sic] a passenger category selected from a plurality of passenger categories, where the passenger category includes a respective balance setting for each of a plurality of audio sources; receiving an adjustment for the balance setting of at least one audio source for the selected passenger category; and reproducing audio output signals based on the balance setting for each audio source (see figs. 1-3, 7-9 and see col. 10 line 36-col. 11 line 67).

2. Appellant's Responses to the Allegations in the Final Rejection of Claims 43-45

Claim 43

As set forth above, Yasuhara does not teach a method of controlling balance settings in an audio system for a vehicle, and claim 43 is patentably distinguished from Yasuhara by each and every one of the following recited steps, "receiving a selected passenger category selected from a plurality of selected passenger categories, where the passenger category includes a respective balance setting for each of the plurality of audio sources" and by the step "receiving an adjustment for the balance setting of at least one audio source for the selected passenger category," and by the step "reproducing audio output signals based on the balance setting for each audio source."

The Examiner's rejection makes a single citation to Yasuhara, apparently for all three of the steps that distinguish claim 43 from Yasuhara. The final rejection sets forth no individual, separate basis for the rejection of any one of the three recited steps. The Examiner refers to Figures 1-3, 7-9 and col. 10, line 36 – col. 11, line 67 (TAB 3) in his rejection of claim 43. A review of Figures 1-3, 7-9 and col. 10, line 36 – col. 11, line 67, set forth at TAB 3, confirms that Yasuhara does not disclose any one of the above three recited steps that comprise claim 43.

There is no means shown in Figures 1-3, 7-9, or described in col. 10, line 36 – col. 11, line 67 (TAB 3), of the step of "receiving a selected passenger category selected from a plurality of passenger categories, where the passenger category includes a respective balance setting for each of the plurality of audio sources." As set forth above, there is no means disclosed anywhere in Yasuhara for providing a respective balance setting for each of a plurality of audio sources, or for receiving a selected passenger category which includes a respective balance setting for each of the plurality of audio sources.

In addition, Figures 1-3, 7-9 and col. 10, line 36 – col. 11, line 67 of Yasuhara do not disclose "receiving an adjustment for the balance setting of at least one audio source for the selected passenger category." Figures 1-3, 7-9 and col. 10, line 36 – col. 11, line 67 of Yasuhara's disclosure (TAB 3) do not disclose or teach any means for adjustment of a balance setting of at least one audio source for any purpose and certainly not for a selected passenger category.

Figures 1-3, 7-9 and col. 10, line 36 – col. 11, line 67 (TAB 3), do not disclose "reproducing audio output signals based on the balance setting of each audio source." As set forth above, and as can be confirmed by review of Figures 1-3, 7-9 and Yasuhara's description at col. 10, line 36 – col. 11, line 67 (TAB 3), there is no disclosure in Yasuhara of balance settings or means for adjusting balance settings for each audio source.

Yasuhara does not disclose, teach or suggest the recited elements and subject matter of claim 43 and the claims dependent thereon, which are patentably distinguished from Yasuhara. The final rejection of claim 43 and the claims dependent thereon should be reversed, and claim 43 should be allowed.



Claims 44-45

In rejecting dependent claims 44-45, the Examiner states "they are essentially similar to claims 40-41 [sic - the Examiner apparently intended to refer to claims 41-42] and are rejected for the reasons stated above apropos the claims 41-42 and are rejected for the reasons set forth above apropos to claims 41-42."

Claim 44

Dependent claim 44 is patentably distinguished from Yasuhara by, in addition to the allowable subject matter of claim 43, its recitation "the audio system comprises a passenger category selection module located on a control unit, the method further comprising generating a graphical user interface on a passenger category selection module to display the plurality of passenger categories and to receive the selected passenger category."

The Examiner rejected claim 44 for the reason stated above, apropos to claim 41. In rejecting claim 41, the Examiner cited Figures 1-3, 7-9, and col. 10, line 36-col. 11, line 67 (at TAB 3). For the reasons set forth in Appellant's response to the final rejection of claim 41, Appellant respectfully submits that claim 44 is patentably distinguished from Yasuhara. Dependent claim 44 is patentably distinguished from Yasuhara by its recitation "the audio system comprises a passenger category selection module located on a control unit, the method further comprising generating a graphical user interface on the passenger category selection module to display the plurality of passenger categories and to receive the selected passenger category." As set forth above, Yasuhara fails to disclose or teach any passenger category selection module located on a control unit, or the step of generating a graphical user interface on the passenger category selection module, or a graphical user interface to display the plurality of passenger categories, or a graphical user interface to receive a selected passenger category.

None of the recited elements or steps of claim 44 are disclosed or taught in Yasuhara in Figures 1-3, 7-9 and col. 10, line 36-col. 11, line 67, as can be confirmed by a review of these portions of Yasuhara at TAB 3.

Yasuhara does not disclose, teach or suggest the recited elements and subject matter of dependent claim 44, which is further patentably distinguished from Yasuhara. The final rejection of claim 44 should be reversed, and claim 44 should be allowed.

#### Claim 45

Dependent claim 45 recites, in addition to the allowable subject matter of independent claim 39, "the plurality of passenger categories comprises at least one of a group of passenger categories, including a driver category, a co-driver category, a backseat category, and a children category."

The Examiner rejected claim 45 for the reason apropos to claim 42. Appellant hereby incorporates the same response conclusion and request set forth in response to claim 42.

Dependent claim 45 should be allowable by virtue of its dependence from allowable claim 43.

#### F. CONCLUSION

For all of the reasons set forth above in response to the Examiner's final rejections of pending claims 1, 6-8, 10, 11, 24, 25, 28 and 31-33 and 38-45, Appellant respectfully submits that the final rejections of the pending claims should be reversed, and the application and its pending claims should be allowed.

**VIII. CLAIMS APPENDIX**

CLAIMS ON APPEAL

1. (Previously Presented) An audio system for use in a vehicle, comprising:  
a plurality of audio sources connected to an amplifier, the amplifier comprising a respective balance setting for each audio source and configured to provide a respective amplified audio signal to each of a plurality of speakers, where the audio sources are operable to generate a plurality of audio output signals that are supplied to the amplifier; and  
a control unit connected with the amplifier, and configured to adjust the respective amplified audio signals for each speaker based on each of the respective audio sources that generates the audio output signal, where the control unit includes a user interface for independently setting each respective balance setting of each respective audio source, where the control unit is further configured to adjust the balance settings based upon a user selected audio source.
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Previously Presented) The audio system of claim 1 where the control unit includes an audio manager module operable to control the balance setting of the amplifier connected to the speakers based on the respective balance setting for each audio source.

7. (Previously Presented) The audio system of claim 1 where the control unit includes a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective audio sources.
8. (Previously Presented) The audio system of claim 1 where the control unit includes a user interface module operable to receive a user adjustment of the respective balance setting of the user selected audio source for each respective audio source.
9. (Canceled)
10. (Previously Presented) The audio system of claim 1 where the control unit is configured to store the respective balance setting for each respective audio source.
11. (Previously Presented) The audio system of claim 1 where the user selected audio source comprises at least one audio source from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player, and a text-to-speech system.
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Previously Presented) An audio system for a vehicle, comprising:  
a plurality of audio sources configured to generate a plurality of audio output signals;  
an amplifier connected to the audio sources, and configured to receive the audio output signals generated by the audio sources;  
a plurality of speakers connected to the amplifier; and  
a head unit connected to the amplifier operable to control a balance setting of the speakers for each respective audio source configured to generate the audio output signals, where the head unit is operable to generate a user interface configured to receive an audio source balance setting for each respective audio source, and further configured to store each respective audio source balance setting for each respective audio source.

25. (Previously Presented) The audio system of claim 24 where the amplifier includes a balance setting circuit and the amplifier is configured to be controlled by the head unit.
26. (Canceled)
27. (Canceled)
28. (Previously Presented) The audio system of claim 24 where the head unit includes an audio manager module operable to control the amplifier based upon the audio source balance setting for each respective audio source.
29. (Canceled)
30. (Canceled)
31. (Previously Presented) The audio system of claim 24 where at least one audio source is selected from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player, and a text-to-speech system.
32. (Previously Presented) A method of controlling balance settings for a plurality of audio sources in an audio system for a vehicle, comprising:
- generating a plurality of audio output signals from a plurality of audio sources;
  - transmitting the audio output signals from the audio sources to an amplifier;
  - receiving selected balance settings for selected audio sources with a head unit connected to the amplifier;

storing the selected balance settings received from the head unit as the respective audio source balance settings for the selected audio sources; and

reproducing an audio output signal on at least two speakers based upon a stored selected balance setting for one of the selected audio sources.

33. (Previously Presented) The method of claim 32 where the head unit includes a graphical user interface configured to receive a selected balance setting of a selected audio source from an occupant of the vehicle, where each audio source can be associated with a respective audio source balance setting.

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Previously Presented) The method of claim 32 where at least one audio source is selected from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player and a text-to-speech system.

39. (Previously Presented) An audio system for use in a vehicle comprising:

a plurality of audio sources connected to an amplifier operably coupled to a plurality of speakers;

a control unit connected to the amplifier;

a passenger category selection module located on the control unit and configured to receive a user selected passenger category from a plurality of passenger categories, and each passenger category includes a respective balance setting for each audio source; and

a user interface module located on the control unit, and configured to adjust a balance setting of the plurality of speakers for the selected passenger category based on a respective audio source that generates an audio output signal and the user selected passenger category.

40. (Previously Presented) The audio system of claim 39 further comprising an audio manager module configured to control the amplifier to audibly reproduce the audio output signal in a predetermined number of speakers based upon the balance setting for each of the audio sources.

41. (Previously Presented) The audio system of claim 39 where the passenger category selection module is operable to generate a balance setting graphical user interface configured to receive a balance setting for each respective audio source for each respective passenger category.

42. (Previously Presented) The audio system of claim 39 where the passenger categories include a driver category, a co-driver category, a backseat passenger category and a children category.

43. (Previously Presented) A method of controlling balance settings in an audio system for a vehicle, comprising:

receiving a selected passenger category selected from a plurality of passenger categories, where the passenger category includes a respective balance setting for each of a plurality of audio sources;



receiving an adjustment for the balance setting of at least one audio source for the selected passenger category; and

reproducing audio output signals based on the balance setting for each audio source.

44. (Previously Presented) The method of claim 43 where the audio system comprises a passenger category selection module located on a control unit, the method further comprising generating a graphical user interface on the passenger category selection module to display the plurality of passenger categories and to receive the selected passenger category.

45. (Previously Presented) The method of claim 43 where the plurality of passenger categories comprises at least one of a group of passenger categories including a driver category, a co-driver category, a backseat passenger category and a children category.

46. (Canceled)

47. (Canceled)

48. (Canceled)

49. (Canceled)

50. (Canceled)

51. (Canceled)

52. (Canceled)

53. (Canceled)

54. (Canceled)

55. (Canceled)

56. (Cancelled).

**IX. EVIDENCE APPENDIX**

None

**X. RELATED PROCEEDINGS APPENDIX**

None

**XI. OTHER MATERIALS THAT APPELLANT CONSIDERS DESIRABLE**

The portions of Yasuhara cited by the Examiner in the rejections being appealed, TABS 1-5, and a complete copy of Yasuhara, U.S. Patent Application Serial No. 7,190,798 (the cited reference).

TAB 1 – Yasuhara, Col. 8, line 20 – Col. 9, line 9, and Figures 3 and 6

TAB 2 – Yasuhara, Col. 4, lines 10-58, and Figures 1-13

TAB 3 – Yasuhara, Col. 10, line 36 – Col. 11, line 67, and Figures 1-3, 7-9

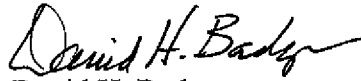
TAB 4 – Yasuhara, Col. 6, lines 12-43, and Figure 3

TAB 5 – Yasuhara, Col. 6, lines 15-22, and Col. 7, lines 36-52, and Figures 1 and 3

TAB 6 – Yasuhara, Entire U.S. Patent No. 7,190,798

Appellant respectfully requests that the Board consider this Appeal Brief and the rejections of the appeal claims, which Appellant respectfully submits are erroneous and should be reversed. Appellant therefore respectfully requests that the rejection be reversed and the appealed claims be allowed.

Respectfully submitted,

  
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DHB/dlh  
Enclosures

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